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(54) ORGANIC THIN FILM TRANSISTOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an organic thin film transistor which assures higher response rate by shortening the channel length and using a compound having higher mobility. SOLUTION: The thin film transistor comprises an organic thin film layer and a gate electrode which is isolated by the predetermined distance respectively from a first electrode and a second electrode which are in contact with the different surfaces of the organic thin film layer and are formed opposed with each other with the predetermined interval kept between them. This organic thin film transistor has the structure where the moving direction of carrier between the first and second electrodes is matched with the thickness direction of the organic thin film layer and also includes. as single material or as mixed material, a compound in which the organic thin film layer is expressed with the following general formula [1].

$$\begin{bmatrix}
R^2 & R^1 \\
R^3 & & & \\
R^4 & & & \\
R^6 & & \\
R^6 & & &$$

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